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SAFE AND SUSTAINABLE EUROPEAN SKY

ETF position addressing ATM performance in view of Reference Period 4 (RP4) of the Single European Sky Performance Scheme.



Safe and sustainable European sky

ETF position on the Reference Period 4 (RP4) of the Single European Sky Performance Scheme

In air navigation service provision, which is a natural local monopoly, we acknowledge the necessity of assessment over the operators' performance. We also acknowledge that it is the ultimate responsibility from States to have control over their airspace (sovereignty principle) and that States must be in a position to have the final say and ensure that their commitment to the Chicago Convention is fulfilled.

The Single European Sky (SES) Performance Scheme establishes targets and monitoring indicators in four Key Performance Areas (KPA): Safety, Environment, Capacity and Cost Efficiency. The scheme's assessment timespan is five years long and the fourth review cycle, Reference Period 4 (RP4), will start at the beginning of 2025.

The five-year-timespan of the RPs is too stringent and doesn't allow for more agile review and adaptation to the new realities of the ATM workplaces and air space users' needs and requests.

The European Transport Workers' Federation (ETF) rejects the disproportionate focus on cost efficiency, at the detriment of the other KPAs. Moreover, capacity is still unfortunately measured by its failure to be delivered, namely regarding delays rather than actual capacity available. Environmental objectives are another concern as they are still largely outside of the control of Air Navigation Service Providers (ANSPs. Inefficient airspace users' flight planning defines the ANSPs' environmental performance). The safety KPA's relevance is questioned and challenged by several actors (including ANSPs) since measuring the safety performance is very difficult to carry out.

The baseline that originally defined the objectives to be pursued through the SES Performance Scheme, i.e. the SES High Level Goals, has been unrealistic from the very beginning. The Reference Periods are largely based on traffic forecasts which can suddenly be disrupted by events which are outside of ANSPs control, such as the Arab Spring, the COVID-19 pandemic or the war in Ukraine closer to now.

These crises, that provoked a sudden decrease of traffic, exacerbate not only the assessing capacity of such a scheme but also the ability of the actors to respond to such unpredictable occurrences. The flawed logic that governed an assessment methodology that favours cost efficiency at the detriment of other areas, in a constant cost-cutting mindset. This creates a disproportionate focus on cost-cutting as cost-efficiency aims will be effectively impossible to achieve. As RP3 revealed its flaws by not being able to sustain shocks as such events were not taken into account, it is difficult to imagine how ANSPs can manage crises without the ability to adapt due to tight restrictions on cost management. Therefore, the ETF reiterates that staff cost cannot be a bargaining chip in the regulators' mind, be it European Commission or Member States regulators.

Before RP4 starts, a thorough analysis of the industry's reaction to the crises is needed, as well as an honest consultation of all stakeholders to develop common ground.

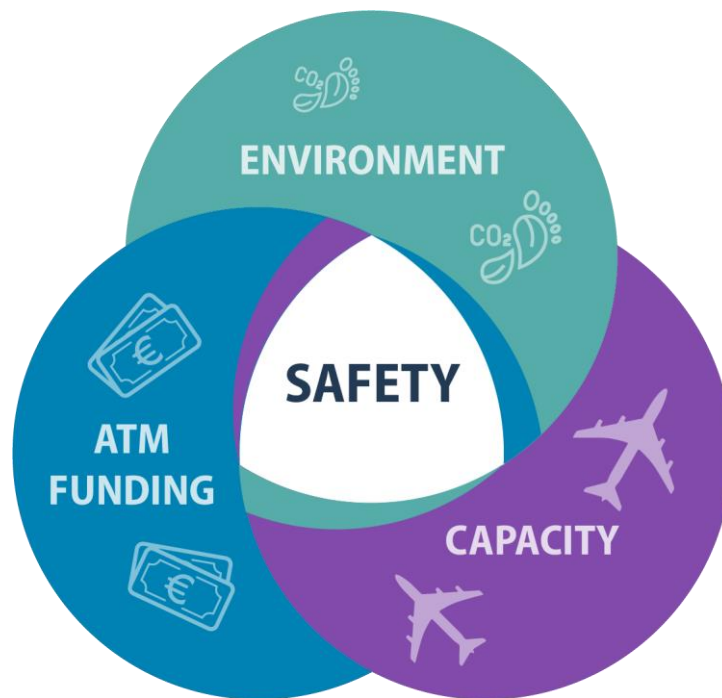
With this position paper, the ETF intends to propose changes to the current regulatory framework and to include new ideas, such as a change management indicator.



ETF integrated vision for RP4

The general idea of establishing separate Key Performance Areas without considering their interdependencies must be reassessed, as such a simplified model cannot describe the complex system of providing Air Navigation Services. Realistic Key Performance Indicators need to be developed which do not only represent short term needs of airspace users, but also build a healthy foundation for the future of the Single European Sky Network, to achieve punctuality, sustainability and flexibility at reasonable cost.

The following chart demonstrates a vision of the interdependencies between the KPAs.



Change Management as a new indicator

The ETF advocates for the introduction of a change management indicator in order to track and monitor the change process through RP4. Significant sums of money are being invested in European ATM, (particularly through the SESAR program) and in order to realise the full benefit of any technology introduced or the social impact it may have, a fit-for-purpose and well-managed process will be required.

It is proven that the success of a technological change is highly dependent on the commitment of staff. If this element is not well managed it could result in failure to deliver the expected benefits simply because the changes had been introduced without incorporating front-line operational and social interests during the change process.

In order to give visibility to this concept, an indicator should be used to demonstrate that change is being managed in an appropriate way. Using existing methodology, similar to that used in the effectiveness of safety management, change management could be equally well measured. The benefits of a well-run change management system (much like a good safety system) are all too invisible, but when done poorly, significant effects are always noticeable. We believe it would be in



all stakeholders' interests to include this indicator in the performance scheme for RP4.

Finally, it is also important that a review system is in place to be able to revise plans in the event of unforeseen circumstances in a timely manner. This should complement an effective appeal mechanism. Although this is provided for in the existing regulation, enforcement and guidance would be welcome to enable stakeholders and states to deal with an appeal in a common and effective manner. Change management and human factors are a key element of the ATM system in Europe. This has been recognised in SES by the need for the so-called "5th pillar" on the human dimension. The need for a proactive approach, for all changes that have to do with the safety of services provided by an aviation organisation, is a must.

Within the performance scheme many different factors and stressors will inevitably result in 'change'. This could be due to the performance improvements envisaged by the targets themselves, or by SES initiatives driven from SESAR, PCP or from EASA.

ATM will face large challenges in the introduction of these initiatives, particularly around new technology and automation tools that are derived from SESAR. To ensure this is managed in a comprehensive manner which allows for the minimum disruption and to realise the most benefit, it would be helpful to focus on and measure change management in a way that it is being considered and implemented appropriately as part of the performance scheme. There are many examples of poor change management in which significant disruption has occurred both from a technological and social aspect, creating safety risks.

The introduction of a change management indicator to the SES performance and charging scheme is therefore proposed. It would allow the progress and level of consultation and the delivery of change to be properly tracked. This would also enable the adoption of intermediate measures to mitigate possible risks and to facilitate/expedite the process.

The indicator, which would be coordinated with the PRB, could track several change management issues, using a similar methodology to that of the Effectiveness of Safety Management, whereby a questionnaire is distributed to States for compulsory completion. This will need to be proportionate and not unnecessarily burdensome.

Areas that could be tracked and measured could include:

- a) The target of the change. What are we trying to achieve?
- b) Impact assessment of the proposed change on the working methods and relationships.
- c) Level of staff involvement and evidence of consultation and agreement, assessment of the buy-in process.
- d) Existence and effectiveness of an arbitration system if agreement cannot be reached
- e) Availability of appropriate human and financial resources.
- f) Provision of proper information and training.
- g) Monitoring impact of change against other PS KPAs.
- h) Assessment of the methodology used, including a system for dispute resolution.

Within the State Performance plan, a requirement could be placed to define and then track ANSPs' change programmes set against set criteria (e.g., those listed above). This could then be reported on and measured at an EU level, giving an overview of the effectiveness of change and the status of implementation of initiatives.

Measuring the effectiveness of a change in the system (e.g., technology, staff, rostering, procedures) is a KPI which can be used in several KPAs like Safety or Capacity.



Change Management as an indicator can also be used in capacity, where switching from measuring delays to measuring capacity increases, would incentivize ANSPs to provide additional capacity where needed. We also would encourage a shift in language and change away from cost efficiency to ATM funding in order to encourage capacity growth rather than solely cost cutting.

SAFETY

In the aviation industry, safety is the highest priority, but as a matter of fact, it is not a given and it comes at a cost. Having redundancies in technical equipment to avoid a single point of failure and enough highly professional and well-trained staff in all areas are crucial to improve and maintain the level of safety necessary in a business where failures could result in endangering people's health and lives.

However, a determined level of funding for safety, and assessing its success by financial cost is clearly a deficient way of measuring this KPA. Such a situation will create an obvious situation that the SES's high-level goal on cost will become unachievable without harming safety.

Furthermore, several new threats are getting more and more worrying, the forefront of which is cybersecurity. Our systems are more and more connected and operable from a distance which means that more entry points are created. This adds the additional concern that safety is not compromised through a system intrusion by malicious actors and is paramount.

The metric to assess safety has never been clearly established. We believe a positive definition of a safe ATM system would provide meaningful safety key performance indicators. Numbers of accidents/incidents, separation minimum infringements, near-miss reports and runway incursions are examples of some of the metrics that have been used to assess the level of lack of safety in the network. A positive definition can foster emergence of positive metrics such as number of flights without incidents, ...

At the heart of safety are staff, and the essential element to optimise staff competency is training. We strongly believe that is an area to explore to find measurables which would then improve safety.

Fragmentation of the safety chain is also a growing concern, previously the entire ATM safety chain was under the same umbrella of national ANSPs which, in our view, is the safest system. Various regulatory updates have changed this situation without addressing the safety element; how to ensure that the ultimate body responsible for safety can actually manage all the components of the safety chain. Digitalisation is an accelerator of such fragmentation and this topic should be appropriately monitored and regulated.

As previously mentioned, ETF believes deeply in the added value of the creation of a change management indicator to measure safety.

Finally, we propose that an Annual ATM Safety report is produced by the EASA collaborative analysis group to the PRB and Commission: such a report would reflect achievements both positive and negative, and would be based on mandatory interviews with stakeholders, including staff representatives.

ENVIRONMENT

Earth's climate system is changing rapidly, and to some extent irreversibly, due to human activity. The United Nations already calls this crisis a 'code red' situation and they are right to do so. Urgent action is necessary in all sectors of the economy to try to mitigate the effects of climate change, with substantial efforts needed in decarbonisation, particularly in the aviation industry. At COP26 in November 2021, 197 governments reaffirmed the target set out in the Paris Agreement in 2015 for countries to restrict global temperature increase to 1.5 degrees, which will require emissions cuts of 45% by 2030 (relative to 2010 levels), and net zero by 2050.

Although the agreement does not foresee emission reporting of the aviation sector, understood to be between 2.5% and 5%, depending on the source and width of the scope, of the total global CO₂ emissions, it is clearly lagging behind this schedule, considering that only 11% of the Earth's population flew each year before the pandemic.

Unsurprisingly, the most efficient and therefore also the most environmentally friendly route for an aircraft to is the shortest one, which allows at least to a certain extent, to minimize the use of fuel or the released CO₂ to the atmosphere.

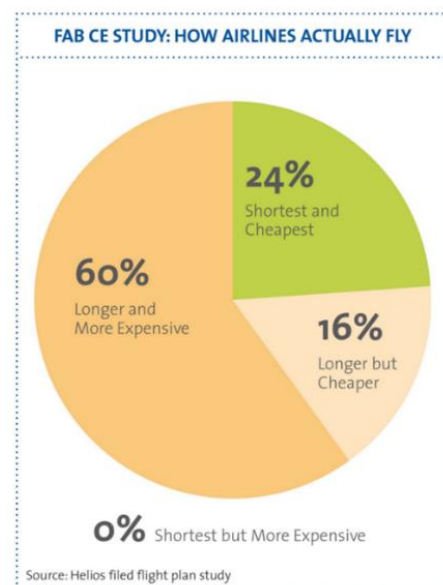
As airspace users pay different ATM charges to use the air navigation services of the countries whose territories they fly over, airlines try to cut the cost of their flight by not choosing the shortest but the cheapest route available. However, as a study commissioned by FAB CE showed, airlines fail most of the time to even select the best available route under their own criteria.

In the end, the air navigation service provider is measured on the inefficiency of the actual flown route, not taking into account that the whole network capacity relies on flight plans and their published times when to expect traffic in order to manage flows. Even with optimal trajectory planning, it is possible that direct routings can be even counterproductive or not possible due to other reasons such as adverse weather situations or active military areas which have to be circumnavigated. Environmental measurement does not take into account which route was chosen by the airline or whether the most possible direct routing given from one single ANSP for a given flight increases or decreases the total length of the flight.

The current system measuring environmental impact of ATM is nothing less than greenwashing to pretend to tackle the climate issue, when it is not actually reflecting the action or lack of action of the ANSPs on the topic.

Whenever capacity shortages occur, the environment seems to be the least important to airspace users, detours are taken gladly in order to avoid delays. Obviously, some level of detour is required to organise air traffic in the sky. Complete free route is not yet a reality and it is unsure whether the technology will ever be able to support it sufficiently to provide the capacity.

The horizontal flight efficiency as it is measured in RP3, does not support the decarbonization goals a sustainable aviation industry must have in order to protect the planet as it is required nowadays.





To make the environmental concerns really a factor, **the role of a centralised entity managing the ATM network is crucial. ETF is therefore proposing to establish a mandatory route selecting service** by a centralised entity, which is not only assigning the most sustainable route, taking into account actual weather, restricted airspace, forecasted winds and restrictions decided by airspace users (avoiding certain areas), but also working in close cooperation with flow management to avoid capacity shortages and over deliveries. Such a service could also be a necessary means to begin tackling the vertical efficiency.

A new KPI shall measure the efficiency of the ANSP's route system in order to provide the shortest and therefore most sustainable route. A change management indicator should ensure the involvement of staff representatives as previously mentioned.

The way in which the ATM funding is currently calculated is not helping the environment and we believe that there are better ways to make progress and incentivise greener aviation through the ATM charging scheme and we will come back to that in the ATM funding section.

CAPACITY



The current capacity indicators do not actually measure capacity, they measure the lack of capacity by measuring induced delay. Delays are mainly a symptom of safety delivery: a way to avoid the ATM system from overflowing.

Capacity at first glance should be expressed as the number of aircraft that can be serviced in a defined time interval e.g. 100 flights per hour. If we put more aircraft into such a system (e.g. 200), delays would appear as a symptom. And one would think that delays are therefore a good indicator of capacity because if they do not exist, then capacity is sufficient. Furthermore, it is thought that the increase in delays is directly proportional to the lack of capacity and the other way round. And as a result, it is a good indicator to measure the capacity performance of an individual ANSP. However, the reality unfortunately does not support this reasoning.

If we go deeper, we can see that this value cannot be defined for a certain airspace as several factors influence the real time management of traffic flow. To explain this, we would like to show the most influential factors:

Complexity

This is one of the least publicly-recognised factors but the one that has the most influence on the number of aircraft that can be serviced at a given time. It can be imagined that a piece of airspace (or more specifically a fragment of that, i.e. a sector) can handle less aircraft if the flow of traffic includes lots of vertical movements, services lots of crossing routes and the traffic consists of high



number of aircraft with different performance (speed, climb performance, cruising altitude etc – commonly known as traffic mix) as opposed to the same sector with a traffic flow of similar aircraft flying to the same geographical direction with few level changes and minor speed differences.

Another factor that can significantly and – perhaps worse – unpredictably increase complexity is weather (thunderstorms, turbulence etc.)

By reducing the complexity of the airspace structure and/or complexity of traffic flow, capacity is expected to be increased, the number of aircraft in a certain sector can grow.

Staffing

Staffing issues are underrated in the current monitoring by the Network. As simple as it may sound, the most effective method to increase capacity is still the provision and training of staff that enables the necessary number of sectors to be opened when traffic demand requires it. Pressure to reduce costs and recent crises leading to revenue shortages incentivised a number of ANSPs to cut staffing and/or to defer training of new recruits: such a phenomenon is not compatible with reaching a sufficient level of trained staff to provide air navigation services. It should be noted that as it is a demanding career, the willingness of young people joining the sector and the desire for existing staff to remain in employment in the sector is highly influenced by the prospective stability and enhancement of social circumstances. In order to provide for that, ANSPs must not be forced by any means to degrade working conditions or social benefits. It is obvious that failing to keep staff in times of downfall results in lack of capacity, as can be seen in current capacity constraints in the aviation system at airports. Therefore, good working conditions and benefits are essential to maintain an efficient aviation ecosystem, including in the provision of air navigation services.

Technology

Technology could be a true enabler in increasing capacity. Unfortunately, the financial resources spent on development and introduction of new technology has not delivered as promised. Even the potential of existing system capabilities cannot be fully exploited because of interoperability issues and the lack of enough EU-wide requirements in this respect. As the Commission is pushing for market principles in ATM system provision – which in our view is counter-productive to interoperability in its current format – it does not reflect market realities in the field of ATM system providers.



Meanwhile a thorough assessment of investments in this area is not conducted while these costs represent a significant amount in the performance plans of states. In our view, it is in the interest of the citizens of the EU that these investments in technology are not spent in vain.



We have demonstrated that delay measurement is not a fit-for-purpose tool to effectively enhance capacity. The allocation of delays to single ANSPs and with a single cause of regulation lacks the necessary system-wide view that is the Single European Sky perspective and does not incentivise improvement. The targets are unrealistic and just make ANSPs treat it as another cost element.

We suggest that to realise the goal of creating a European ATM system with higher capacity, we should set targets that are fair to expect from ANSPs, rather than setting targets on which they have only limited influence (eg. traffic mix, weather, neighbouring ANSPs capacity).

Airspace design changes

We also acknowledge that the way in which the airspace structure is built affects capacity and that when traffic patterns vary, it may be beneficial to change the design of the airspace to increase capacity. This can be measured by a change management indicator as previously mentioned, comparing the previous situation with the expected one and making sure that transition is appropriately managed.

The introduction of a centralised entity in charge of assigning routes to aircraft at flight planning stage is also an enabler to make better use of the available capacity.

ETF therefore recommends that the measurement of capacity is done through the following concepts:

- ▶ Change management
- ▶ Training and staff (level of staff and training continuity)
- ▶ Technology (change management including proof of capacity gains)
- ▶ Complexity analyses – trade-off
- ▶ Airspace changes
- ▶ Better use of available capacity - A centralised entity should be in charge of assigning routes to aircraft at flight planning stage

ATM FUNDING

ETF suggests renaming the KPA 'Cost efficiency' to 'ATM Funding'. 'Cost efficiency' is by definition the act of saving money by changing a product or process to work in a better way. It is measured in businesses by monitoring the ratio of the output produced to the costs incurred. The critical question is, although it might be difficult to answer, what's the product of an ANSP?

ETF reminds all stakeholders that the commitment from States taken under the signing of the Chicago Convention, is that air traffic management must be ensured regardless of the existence of air traffic.

We believe that the ANSP's product is a safe, orderly and expeditious flow of air traffic at any given time, not simply the number of flights conducted within the area of responsibility. As operators tend to fulfil the requirements assigned by the European Commission, but cannot increase the resources because traffic is not a product of the ATM industry, they always go for what they can change: cost. Unfortunately, most expenses are related to having staff to provide the service.



A KPA of ATM funding should be shock resilient, reflecting the responsibility of States on the continuous existence of an adequate ATM infrastructure. How to tackle this KPA should be left for definition and approval at national level as local/national circumstances are of the essence of what affects cost of service provision.

Staff availability and competence are an essential element of ATM safety delivery. Discontinued employment is difficult to reconcile with safe service delivery. Furthermore, regarding ATM funding, we believe it is important that ANSPs' uncontrollable costs – most of which are outside the scope of the regulatory powers of the European Union and were existing well before the creation of the performance scheme – remain untouched as in previous reference periods. Some of these costs cannot be adequately absorbed directly by ANSPs unless some form of other allowance is made for their recovery, and it would be unrealistic to suddenly force an ANSP to bear these in the form of a simple price cap.

ETF is completely against the concept of a simple price cap, as this would have the effect of increasing the financial risk to ANSPs which would result in a significant degradation of service. Capital expenditure (CAPEX) does need to be examined, and whether or not it forms part of the performance scheme itself, transparent and accurate analysis of investments should be completed. However, it is not appropriate for airspace users to have control or 'final sign-off' of investment plans. ANSPs must be in control of their own investment decisions.

ETF strongly advocates to keep the regulation for ANSPs to adjust their determined cost for inflation, eligible costs and recovery of unforeseen costs.

ETF is cautiously in favour of the deployment of technological developments provided that they are properly funded, well-thought-through, part of an adequate change management process and appropriate and comprehensive social dialogue has taken place. These technologies should be able to demonstrate real benefit with the supporting case of a mature cost-benefit analysis completed to demonstrate their real value. In order to ensure staff commitment, which is crucial for the success of a new technology, this cost-benefit analysis should be part of the change management process including social dialogue to enable inputs and comments from staff representatives.

The charging mechanism does not adequately support the Environment and Capacity KPAs as the interdependencies show: a more sustainable and/or larger capacity ATM system is often a more expensive one. Due to the nature of the charging process, cheaper routes are often flown by users which are not the most environmental, or cause the funnelling of traffic, thus increasing the pressure on capacity unnecessarily.

The introduction of a centralised entity in charge of assigning routes to aircraft could also be an opportunity to redesign the formula to calculate en-route charges. Instead of calculating the air traffic control charges according to the flown distance in NM (nautical miles) and MTOW (maximum take-off weight), The use of an ecological basis as a calculation in the future is proposed. Actual load of the aircraft could be reflected in view of getting smaller aircraft to pay a potentially larger share of ATM charges, as the load to provide ATM services to a business jet or to an A380 is similar.

We also propose to reward fuel efficiency: each manufacturer can provide an average actual consumption for its aircraft types. The aircraft type with the lowest consumption on an annual reference date (or per reference period) is to be set as the baseline in Europe. Deviating from this, there will be an incentivising system based on route charges variation for those types that consume more fuel. This incentivising scheme should remain neutral over time for ANSPs.



CONCLUSION

ETF believes in the added value of an ATM performance monitoring. We believe the current focus on cost is misplaced and fails to deliver the targets set. Furthermore, investment oversight is faulty.

We believe that an inclusive approach rewarding positive change should be established. This could be achieved by:

- ▶ introducing change management indicators
- ▶ acknowledging the interdependencies between the KPAs
- ▶ measuring safety for what it should be
- ▶ avoiding greenwashing and using ATM charges instead of actually making flying a greener activity
- ▶ looking at capacity, not at the imbalance between available capacity and actual demand, and
- ▶ measuring cost efficiency in a manner which continuously allows the ATM industry to be adequately funded.

Please do not hesitate to get in touch with us to discuss these proposals further for the better of aviation.

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